

CLAIMS

1. A rotary bearing with current feed-through means for a sausage clipping machine, including a bearing casing (40) and a bearing shaft (20) rotatably accommodated therein, wherein the bearing casing (40) and the bearing shaft (20) are at least partially made from an electrically conducting material,

wherein there is provided at least one current path (SW) which is passed through the bearing casing (40) and the bearing shaft (20) and which is electrically insulated at least in relation to the electrically conducting portions of the bearing shaft (20) and the bearing casing (40) and which has at least one outer connecting terminal (22, 48) provided on the bearing casing (40) and the bearing shaft (20) respectively, and

wherein the current path (SW) has a current path bolt (24) of electrically conducting material which is fitted in a through bore (20d) in the bearing shaft (20),

characterized in that at its one end (24a) the current path bolt (24) projects from the bearing shaft (20) and forms the outer connecting terminal (22) of the bearing shaft (20) and at its other end has a touching contact region (24b) which is in electrically conducting relationship with a touching contact region (24b) of the bearing casing (40) to form the touching contact portion (24b, 50) of the current path (SW),

wherein the touching contact portion (24b) of the current path bolt (24) is elastically prestressed by means of a spring element (30) in the direction of the touching contact region (50) of the bearing casing (40), and

wherein the spring element (30) is electrically insulatedly supported at the end (20c) of the bearing shaft (20) which is fixed in its axial position in the direction of the touching contact region (50) of the bearing casing (40).

2. A rotary bearing as set forth in claim 1 characterized in that between the bearing shaft (20) and the bearing casing (40) the current path (SW) has a touching contact portion (24b, 50) which permits at least a rotary movement between the bearing shaft (20) and the bearing casing

(40) without loss of the electrical conductivity of the current path (SW) and which is composed of touching contact regions (24b, 50) at the bearing casing side and the bearing shaft side.

3. A rotary bearing as set forth in claim 2 characterized in that the touching contact portion (24b, 50) is in the form of a sliding contact portion.

4. A rotary bearing as set forth in claim 2 or claim 3 characterized in that the touching contact portion (24b, 50) at the bearing shaft side and/or the bearing casing side can be axially elastically prestressed in the contact direction.

5. A rotary bearing as set forth in one of claims 1 through 4 characterized in that the current path (SW) extends in coaxial relationship with the longitudinal center line (ML) of the bearing shaft (20).

6. A rotary bearing as set forth in one of claims 1 through 5 characterized in that the current path (SW) is formed by machine elements (22, 24, 50, 48).

7. A rotary bearing as set forth in one of claims 1 through 6 characterized in that the touching contact region (24b) of the current path bolt (24) has a contact surface which is larger than the cross-sectional area of the current path bolt (24).

8. A rotary bearing as set forth in one of claims 1 through 7 characterized in that the spring element (30) is a coil compression spring.

9. A rotary bearing as set forth in one of claims 1 through 8 characterized in that the spring element (30) is electrically insulatedly supported at the end (20c) of the bearing shaft (20) which is fixed in its axial position in the direction of the touching contact region (50) of the bearing casing (40), with the interposition of a sliding ring (32).

10. A rotary bearing as set forth in one of claims 1 through 9 characterized in that the spring element (30) is electrically insulatedly supported at the end (20c) of the bearing shaft (20) which is fixed in its axial position in the direction of the touching contact region (50) of the bearing casing (40) by an annular insulating layer (34).

11. A rotary bearing as set forth in one of claims 1 through 10 characterized in that the outer connecting terminal (22) of the current path bolt (24) is electrically insulated with respect to the bearing shaft (20), preferably by means of an annular insulating layer (28).

12. A rotary bearing as set forth in one of claims 1 through 11 characterized in that the touching contact region of the bearing casing (40) is formed from a contact ring (50) of an electrically conducting material which is accommodated in the bearing casing (40) and whose contact surface corresponds preferably at least in the outside dimensions thereof to the contact surface of the current path bolt (24).

13. A rotary bearing as set forth in one of claims 1 through 12 characterized in that the bearing casing (40) has a first and a second bearing casing portion (42, 44) in the direction of the axis of rotation, wherein the second bearing casing portion (44) is provided in the region of the outer connecting terminal (48) of the bearing casing (40) and comprises an electrically insulating material.

14. A rotary bearing as set forth in claim 13 characterized in that the second bearing casing portion (44) accommodates the touching contact portion (24b, 50) of the current path (SW).

15. A rotary bearing as set forth in one of claims 1 through 14 characterized in that the insulation for the current path bolt (24) in the interior of the through bore (20d) in the bearing shaft (20) and at the ends (20a, 20c) of the bearing shaft (20) comprises an identical material.